



Gulf of Mexico Harmful Algal Bloom Bulletin

Region: AL/MS/FL

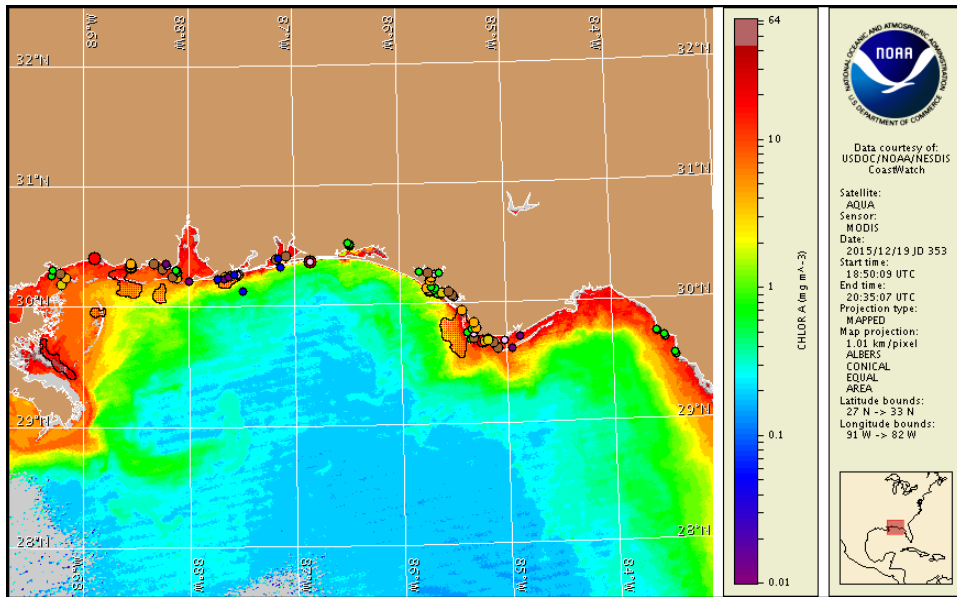
Monday, 21 December 2015

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Thursday, December 17, 2015



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from December 11 to 19: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

Detailed sample information for Florida can be obtained through FWC Fish and Wildlife Research Institute at:

<http://myfwc.com/redtidestatus>

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit at: <http://tidesandcurrents.noaa.gov/hab/bulletins.html>

Conditions Report

Not present to high concentrations of *Karenia brevis* (commonly known as Florida red tide) are present along- and offshore St. Bernard Parish in Louisiana; Harrison and Jackson counties in Mississippi; Mobile and Baldwin counties in Alabama; and portions of northwest Florida from Escambia to Franklin counties. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for alongshore Louisiana, Mississippi, Alabama, and northwest Florida Monday, December 21 to Thursday, December 24 is listed below:

County Region: Forecast (Duration)

St. Bernard Parish: Moderate (M), Very Low (Tu-Th)

Harrison County: Moderate (M-Tu, Th), High (W)

Harrison County, bay regions: High (M-Th)

Jackson County: High (M-Th)

Mobile County: Moderate (M-Tu), High (W-Th)

Baldwin County: Moderate (M-Tu, Th), High (W)

Baldwin County, east bay regions: Low (M-Th)

Escambia County: High (M-Th)

Escambia County, bay regions: Low (M-Th)

Santa Rosa County: High (M-Th)

Santa Rosa County, bay regions: Low (M-Th)

Okaloosa County: Moderate (M-Tu, Th), High (W)

Walton County: Moderate (M-Tu, Th), High (W)

Walton County, bay regions: Low (M-Th)

Bay County: Low (M), High (Tu-Th)

Bay County, bay regions: Moderate (M-Tu), High (W-Th)

Gulf County: Very Low (M-Th)

Gulf County, west bay regions-St. Joseph Bay area: Moderate (M-Th)

Gulf County, east bay regions-Indian Lagoon area: High (M-Th)

Franklin County: Low (M-Th)

Franklin County, bay regions: Moderate (M-Th)

All Other NWFL County Regions: None expected (M-Th)

SWFL County Regions: Visit <http://tidesandcurrents.noaa.gov/hab/#swfl>

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Health information, from the Florida Department of Health and other agencies, is available at http://tidesandcurrents.noaa.gov/hab/hab_health_info.html. Respiratory irritation has been reported alongshore Escambia and Okaloosa counties, FL. Dead fish were reported from Escambia, Santa Rosa, Okaloosa, Walton, Bay, and Gulf counties, FL.

Analysis

Samples collected along- and offshore Louisiana, Mississippi, Alabama, and northwest Florida indicate background to 'high' *Karenia brevis* concentrations from St. Bernard Parish, LA to Franklin County, FL. New sampling in Louisiana indicates *K. brevis* is now present with up to 'medium' concentrations detected last week alongshore St. Bernard Parish (FDA; 12/14-15). In the bay regions of Okaloosa County, Florida, recent sampling in Toms Bayou and Boggy Bayou, where fish kills have been reported indicate that *K.*

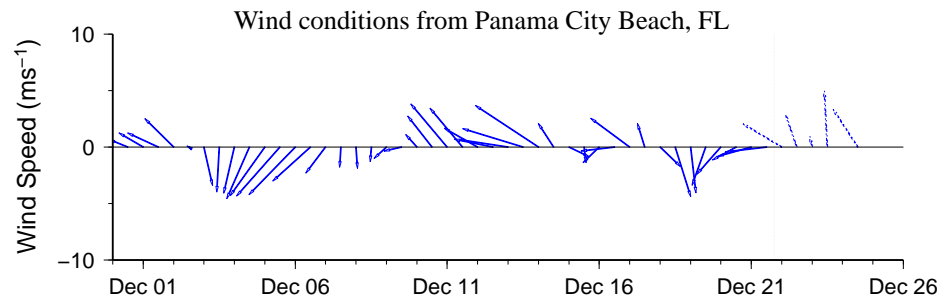
brevis is not present (FWRI; 12/15). In Baldwin County, Alabama, sampling at Romar Beach and the pier at Gulf State Park detected up to 'medium' *K. brevis* cell concentrations (ADPH; 12/17). Fish kills have been reported Escambia, Santa Rosa, Okaloosa, Walton, Bay, and Gulf counties, FL (FWRI, MML; 12/17-21). Over the past few days, reports of respiratory irritation have been received from Escambia and Okaloosa counties, FL (MML; 12/17-21). Detailed sample information and a summary of impacts can be obtained through FWC Fish and Wildlife Research Institute at:

<http://myfwc.com/redtidestatus>.

In recent ensemble imagery (MODIS Aqua, 12/19), patches of elevated to very high chlorophyll (2 to $>20\mu\text{g/L}$) with the optical characteristics of *K. brevis* are visible along- and offshore from Louisiana to Franklin County, Florida. This anomaly extends from the Mississippi River Gulf Outlet (MRGO) in the St. Bernard Parish region of Louisiana, where *K. brevis* was recently detected, through Hancock County, Mississippi, where *K. brevis* has not yet been detected. Additional sampling of both regions is recommended to determine the extent of the *K. brevis* bloom.

Forecasted winds today through Thursday may promote the potential for westerly transport of surface *K. brevis* concentrations along the coasts of Mississippi, Alabama, and northwest Florida.

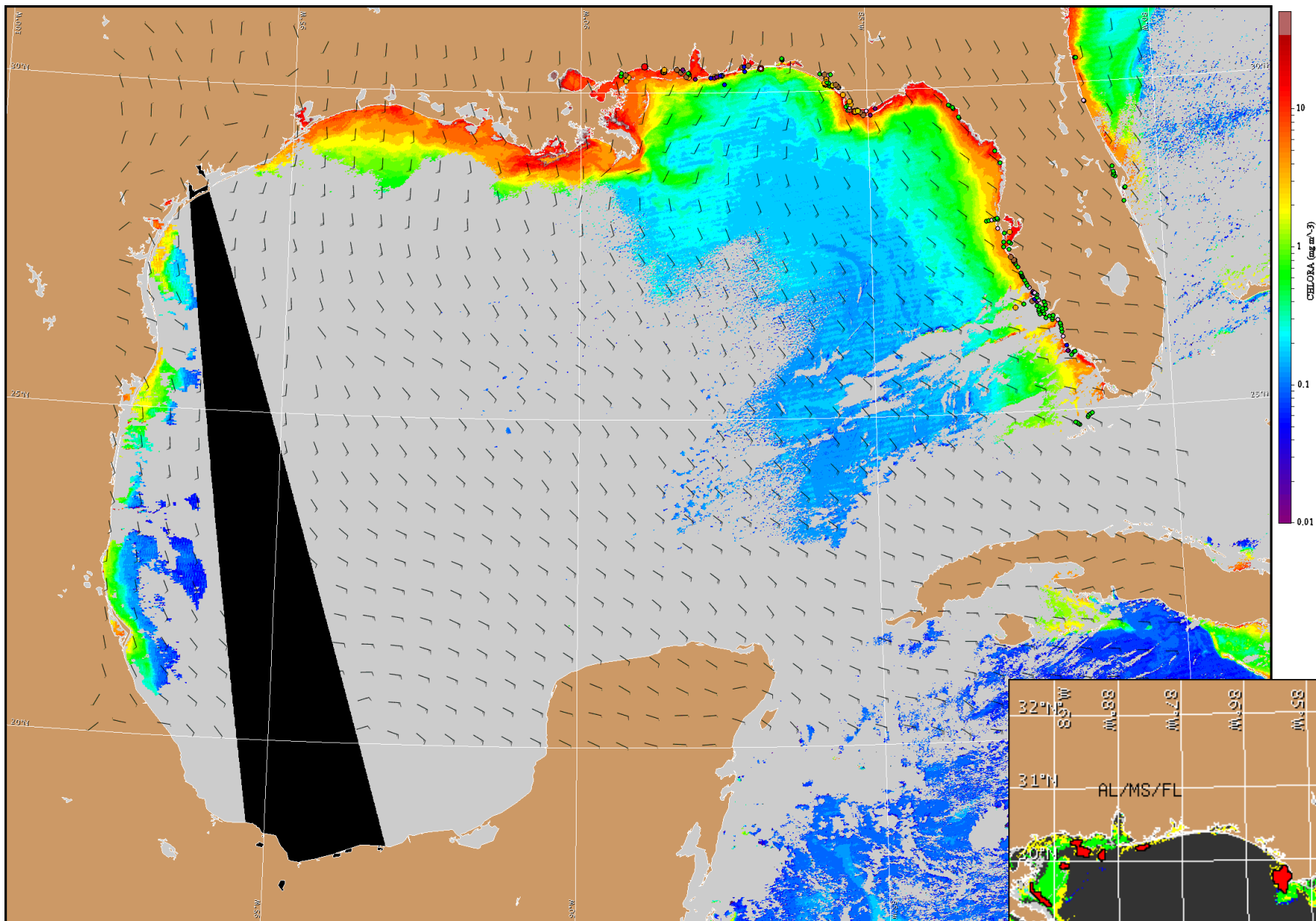
Davis, Lalime



Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).

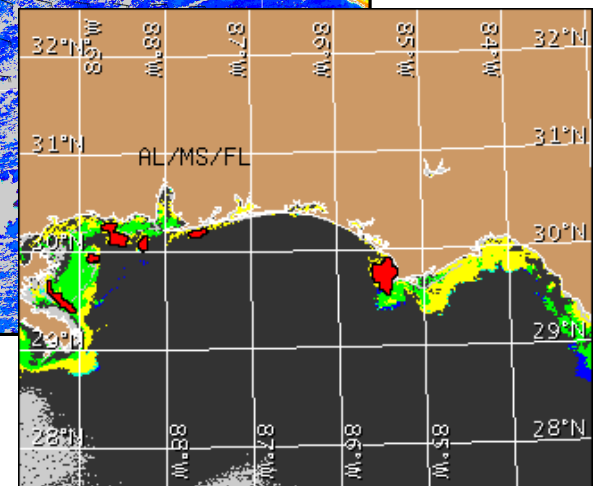
Wind Analysis

Escambia to Gulf counties: East winds (15kn, 8m/s) today becoming southeast winds (10-15kn, 5-8m/s) this afternoon through evening. South to southeast winds (10-20kn, 5-10m/s) Tuesday through Thursday.



Satellite chlorophyll image and forecast winds for December 22, 2015 12Z with points representing cell concentration sampling data from December 11 to 19: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

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Verified and suspected HAB areas shown in red. Other areas with *K. brevis* optical characteristics shown in yellow (see p. 1 analysis for interpretation).